

II

# Crawley Urban District Council



## ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE YEAR

1969

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FOURTEENTH

A N N U A L R E P O R T  
OF THE PUBLIC HEALTH DEPARTMENT

of

CRAWLEY URBAN DISTRICT

of

WEST SUSSEX

1969

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K.N. Mawson, M.B., Ch.B., D.P.H., F.R.S.H.  
Medical Officer of Health  
T. Steel, M.A.P.H.I., M.R.S.H.  
Chief Public Health Inspector

Health Department,  
Town Hall,  
The Boulevard,  
CRAWLEY.

(Telephone: Crawley 28744)

Members of the Housing Planning and Health  
Committee 1969/70

Mr. V.L. Lelew (Chairman)  
Mr. K.J. Bridgeman (Vice-Chairman)  
Mr. B.K. Boniface  
Mr. R.L. Davis  
Mrs. E.V. Fowler  
Mr. R.J. Harris  
Mr. W.P. Hill  
Mr. J.E. Miles  
Mr. A. Quine  
Mr. G.E. Waller  
Mr. I.J. Young

(The Chairman and Vice-Chairman of the  
Council are ex-officio members of this  
Committee)

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CRAWLEY URBAN DISTRICT COUNCIL

July, 1970

Health Department,  
Town Hall,  
The Boulevard,  
CRAWLEY.To the: Chairman and Members of the  
Crawley Urban District Council

Ladies and Gentlemen,

I beg to submit to you the Annual Report of the Health Department for 1969, in which an account is given of the work carried out during the year. This is the fourteenth such Report to be circulated since the Urban District was formed in April, 1956, and has been prepared in accordance with the requirements of Circular No. 1/1970 of the Department of Health and Social Security.

Vital Statistics

Extracts from the Vital Statistics will be found on page 6. The Registrar-General's estimate of population for mid-1969 rose by 1,210 to 64,520. We still pass details of the weekly births and deaths to the Manager of the Commission for the New Towns, Crawley Executive, and he tells me that their estimate of population at the end of the year was 66,000. The total births during 1969 were 1,005, a rise of 53 from the previous year, and so the Crude Birth Rate has risen to 15.6. Of the total births, 64 were illegitimate, giving a figure of 6.4%, which is well below the national average.

A detailed table of causes of death appears on page 7 and it will be seen that these are again listed in the new form in compliance with the International Classification of Diseases 1965, which calls for a greater breakdown into categories. Although only 41 causes are shown, the classification is now made under 65 headings, those with no deaths allocated being omitted from the table. Motor vehicle accidents accounted for 3 deaths, compared with 6 in the previous year, while 5 were attributed to other accidents, all these being adults.

Malignant disease again shows a slow but steady overall increase with 102 deaths, compared with 94 in the previous year, but of these 34 were due to cancer of the lung or bronchus, the highest figure ever recorded in the town. In contrast to the steadily rising percentage, cancer of the uterus again caused but 3 deaths, less than a tenth of that virtually preventable disease "smoker's cancer".

Deaths from Ischaemic Heart Disease ("coronaries") also reached a new high level with a total of 84, 54 being male and 30 female and

of these 37 were of working age. There can be no question that this is another disease in which the smoking of cigarettes is a proven factor.

#### Notifiable Disease

A table giving details of all notifications will be found on page 10. In the report for 1968, I commented that the number of Measles cases notified was only 40, although the usual biennial rise should have commenced in the late autumn of that year; this did not occur and the total notifications received numbered a mere 19, the smallest figure in any year since our records began. (It should be remembered that in "epidemic years" the number of cases in England and Wales had frequently exceeded three-quarters of a million, with 25,000 in the "between" years). It can no longer be doubted that this improvement is the result of the immunisation campaign, even though the proportion of susceptible children now protected is still far from the figure at which we aim. An unfortunate pause in the campaign occurred in the summer, owing to a national shortage of measles vaccine; had immunisation continued without interruption, probably the figure would have been even lower.

No cases whatever of whooping cough were notified, but "scarlet fever" with 25, was rather higher than normal; fortunately in most cases this disease is now relatively mild and responds to modern antibiotic therapy.

Only 6 cases of Sonne dysentery were the subject of formal notification, these being scattered in time and place; the first three reported, two in April and one in July, were in adults. The remaining notifications referred to one baby and two children of school age. In addition to these, the department investigated an outbreak of gastro-enteritis in the Pound Hill and Three Bridges area, involving three schools, the first case reported by the laboratory being a boy living in the Dorking and Horley area who was found to be infected by *Shigella sonnei*. Immediate enquiries revealed that other cases with gastro-intestinal symptoms had been reported from the school and strict precautions were therefore immediately arranged, similar action being taken in two other schools when additional cases were brought to light by the enquiries. A close watch was necessary for about five weeks - but very few of the specimens revealed *Shigella* and it became clear that we were again dealing mainly with a non-specific infection.

Of the two cases of Acute Meningitis, the first was a boy of 14 years from the Southgate Neighbourhood, who was admitted to hospital and found to be suffering from a meningococcal infection ('cerebro-spinal fever' or 'spotted fever' were the old terms for this malady). He quickly responded to treatment. A month later

a baby of five weeks from West Green developed meningeal symptoms, but investigation at hospital revealed that this was of viral origin.

Ten cases of infective hepatitis were notified as compared with three during 1968, but it must be remembered that this disease was only made notifiable as from mid-June in that year. There was no evidence that any of these infections were related to the misuse of drugs.

In spite of the large number of people who now spend their holidays in Southern Europe or Northern Africa - a large proportion of whom do not seek protection by typhoid immunisation - no cases of infection by paratyphoid were recorded in the year among Crawley residents. The first of two cases of typhoid fever was a young boy of 10 years, the eldest of four children; the diagnosis was made fairly early in the disease and he was admitted to Foredown Hospital on July 22nd. The family of course remained under close medical supervision and three days later the four-year-old girl was found to have a moderate fever. She was promptly sent to join her brother in hospital and there the diagnosis was confirmed. There was good co-operation from the parents and no further cases occurred. Infection had undoubtedly been contracted abroad.

### Food Poisoning

In all, five cases of presumed food poisoning were officially notified during the year. Two occurred in young children of 9 and 18 months, infected with *Salmonella oranienburg* and *Salmonella typhimurium* (phage type 129). Both of these are rather rare organisms in this country, yet all contact specimens were negative and there was no history of alimentary upset in either household. The second organism is most commonly met with in Spain, yet no contact with anyone who had visited that area could be traced.

Early in June we received a complaint from the night staff of a factory on the industrial estate; we were told that nine men who were on the night shift had eaten a meal consisting of heated cottage pie. Eight had been taken ill about 12 hours later. None had sought medical advice, although the symptoms in some cases were moderately severe, yet short-lived. Enquiries revealed that the minced meat had been purchased on the 16th June and immediately placed in the refrigerator, being cooked on the morning of the 17th and used in the midday canteen meal for the day staff, the small quantity needed for the pie being placed in a smaller container and cooled until 12.30 p.m. when it was placed in the refrigerator. On the 18th the pie was cooked from 10 a.m. to 11.15 a.m. at 350°F and left to cool until 1.30 p.m., when it was wrapped in polyfilm and placed in the vending-machine cooler. This should reduce the temperature to 45° in 1¼ hours, this temperature being maintained until 10.15 p.m. when the small heater was automatically switched on, raising the temperature to 250°F in about 1¼ hours; the meal was consumed at 1 a.m.

Specimens from three of the victims all showed, as expected, a heat-resistant strain of Cl. welchii.

This is yet another incident which emphasises the vital importance of proper temperature control; certainly cooling and preparation methods were highly unsatisfactory - for "cooling" took place in the kitchen where the ambient temperature was 70°F ! Immediate steps were taken with the contractors, management and staff to ensure that a similar event did not occur in the future.

#### International Certificates of Vaccination

During the year the total number of International Certificates stamped in the Department was 1,839, an increase on the previous year.

#### Care of the Aged

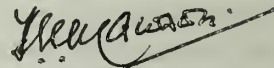
I am glad to say that it was again unnecessary to take action during the year under Section 47 of the National Assistance Act, 1948. This is the section which deals with the compulsory removal from their homes of elderly and infirm persons living in insanitary conditions.

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Once again I would like to express my thanks to Mr. Steel, the Chief Public Health Inspector, and to his staff for their help during the year and for their assistance in the compilation of this report.

I am, Ladies and Gentlemen,

Your obedient Servant,



Medical Officer of Health

Staff of the Public Health Department

Kenneth N. Mawson. M.B., Ch.B., D.P.H., F.R.S.H.  
Medical Officer of Health; also M.O.H. to N.E.  
Combined Sanitary District of West Sussex and  
Departmental Medical Officer to the West Sussex  
County Council.

T. Steel, F.A.P.H.I., M.R.S.H., Chief Public Health  
Inspector

Certificate of the Royal Sanitary Institute and  
Sanitary Inspectors Joint Board.  
Certificate of the Royal Sanitary Institute for  
Inspectors of Meat and Other Foods.

D.E. Smith, M.R.S.A.S., M.A.P.H.I., Deputy Chief  
Public Health Inspector

Certificate of the Royal Sanitary Association of  
Scotland.  
Certificate of the Royal Sanitary Association of  
Scotland for Inspectors of Meat and Other Foods.  
Testamur of the Institute of Public Cleansing.

L.P. Poole, M.A.P.H.I., M.R.S.H., Senior District  
Inspector

Certificate of the Royal Sanitary Institute and  
Sanitary Inspectors Joint Board.  
Certificate of the Royal Sanitary Institute for  
Inspectors of Meat and Other Foods.

A.F. Screeton, M.A.P.H.I., District Public Health  
Inspector

Diploma of the Public Health Inspectors Education  
Board.

J.M. Coultous, M.A.P.H.I., District Public Health  
Inspector

Diploma of the Public Health Inspectors Education  
Board.

Trainee Public Health Inspector - W.J. Heron

Chief Clerk/Technical Assistant - A. Moss

Clerk/Typist - Miss G. Weston to 18th October 1969

Mrs. B.J. Dearn from 1st December, 1969

Secretary to M.O.H. - Miss M. Heydon

CRAWLEY URBAN DISTRICT COUNCILStatistics & Social Conditions of the Area 1969

|                                                                     |     |     |     |     |            |
|---------------------------------------------------------------------|-----|-----|-----|-----|------------|
| Area (Acres)                                                        | ... | ... | ... | ... | 5,622      |
| Estimated resident population, mid-1969                             | ... | ... | ... | ... | 64,520     |
| Approximate No. of Domestic Hereditaments as at 31st December, 1969 | ... | ... | ... | ... | 19,500     |
| Rateable Value (31st December, 1969)                                | ... | ... | ... | ... | £4,217,536 |
| Sum represented by a Penny Rate (1969/70)                           | ... | ... | ... | ... | £17,140    |

EXTRACTS FROM VITAL STATISTICS OF THE YEAR

|                                                                                                      | Total | M.  | F.                |                                                                                    |
|------------------------------------------------------------------------------------------------------|-------|-----|-------------------|------------------------------------------------------------------------------------|
| Live Births (Legitimate                                                                              | 941   | 468 | 473               | ) Birth Rate = 15.6'<br>per 1,000 estimated<br>resident population<br>in mid-1969. |
| (Illegitimate)                                                                                       | 64    | 27  | 37                |                                                                                    |
| Illegitimate Live Births = 6%                                                                        |       |     |                   |                                                                                    |
| Still Births (Legitimate)                                                                            | 18    | 12  | 6                 | ) Rate per 1,000 total<br>births = 18.0                                            |
| (Illegitimate)                                                                                       | 0     | 0   | 0                 |                                                                                    |
| Deaths                                                                                               | 414   | 225 | 189               | Crude Death Rate<br>= 6.4                                                          |
| England & Wales Birth Rate = 16.3                                                                    |       |     | Death Rate = 11.9 |                                                                                    |
| Local adjusted Birth Rate = 12.3                                                                     |       |     |                   |                                                                                    |
| Local adjusted Death Rate = 11.7                                                                     |       |     |                   |                                                                                    |
| West Sussex Urban Districts Birth Rate = 15.1                                                        |       |     | Death Rate = 10.1 |                                                                                    |
| During the year, 12 male and 7 female infants died before a year.<br>(Two were illegitimate infants) |       |     |                   |                                                                                    |
| Death Rate of Infants under 1 year of age:                                                           |       |     |                   |                                                                                    |
| All Infants per 1,000 Live Births .....                                                              |       |     |                   | 19.0                                                                               |
| Legitimate Infants per 1,000 Legitimate Live Births .....                                            |       |     |                   | 18.0                                                                               |
| Illegitimate Infants per 1,000 Illegitimate Live Births ..                                           |       |     |                   | 31.0                                                                               |
| (Infant Mortality Rate for England and Wales .....                                                   |       |     |                   | 18.0)                                                                              |
| Of the above 19 infant deaths, eleven (7 male and 4 female)<br>occurred in the first month.          |       |     |                   |                                                                                    |
| Neonatal I.M.R. ....                                                                                 |       |     |                   | 11.0                                                                               |
| Early Neonatal Mortality Rate .....                                                                  |       |     |                   | 10.0                                                                               |
| Perinatal Mortality Rate .....                                                                       |       |     |                   | 27.0                                                                               |

CAUSES OF DEATH IN THE CRAWLEY URBAN DISTRICT

|                                            | <u>Males</u> | <u>Females</u> |
|--------------------------------------------|--------------|----------------|
| 1. Malignant neoplasm, buccal cavity etc.  | 1            | 1              |
| 2. Malignant neoplasm, oesophagus          | -            | 2              |
| 3. Malignant neoplasm, stomach             | 5            | 4              |
| 4. Malignant neoplasm, intestine           | 9            | 7              |
| 5. Malignant neoplasm, lung, bronchus      | 29           | 5              |
| 6. Malignant neoplasm, breast              | -            | 11             |
| 7. Malignant neoplasm, uterus              | -            | 3              |
| 8. Malignant neoplasm, prostate            | 5            | -              |
| 9. Leukaemia                               | 1            | -              |
| 10. Other malignant neoplasms              | 9            | 10             |
| 11. Benign and unspecified neoplasms       | -            | 1              |
| 12. Other endocrine etc. diseases          | -            | 2              |
| 13. Anaemias                               | 1            | -              |
| 14. Mental disorders                       | 1            | -              |
| 15. Meningitis                             | 1            | -              |
| 16. Other diseases of nervous system, etc. | 2            | 1              |
| 17. Chronic rheumatic heart disease        | 1            | 1              |
| 18. Hypertensive disease                   | 1            | 3              |
| 19. Ischaemic heart disease                | 54           | 30             |
| 20. Other forms of heart disease           | 7            | 13             |
| 21. Cerebrovascular disease                | 24           | 35             |
| 22. Other diseases of circulatory system   | 7            | 7              |
| 23. Influenza                              | 3            | 1              |
| 24. Pneumonia                              | 18           | 23             |
| 25. Bronchitis and emphysema               | 20           | 6              |
| 26. Asthma                                 | 1            | -              |
| 27. Other diseases of respiratory system   | 2            | 2              |
| 28. Peptic ulcer                           | 2            | -              |
| 29. Intestinal obstruction and hernia      | -            | 1              |
| 30. Cirrhosis of liver                     | -            | 1              |
| 31. Other diseases of digestive system     | 1            | 2              |
| 32. Nephritis and nephrosis                | 1            | 1              |
| 33. Other diseases, genito-urinary system  | -            | 3              |
| 34. Diseases of musculo-skeletal system    | 2            | 1              |
| 35. Congenital anomalies                   | 4            | 5              |
| 36. Birth injury, difficult labour, etc.   | 1            | 3              |
| 37. Other causes of perinatal mortality    | 4            | -              |
| 38. Symptoms and ill defined conditions    | 1            | -              |
| 39. Motor vehicle accidents                | 3            | -              |
| 40. All other accidents                    | 2            | 3              |
| 41. Suicide and self-inflicted injuries    | 2            | 1              |
|                                            | <u>225</u>   | <u>189</u>     |

TABLE SHOWING VITAL STATISTICS - 1957-1969

| Year | Est.<br>Popu-<br>lation | NO. OF BIRTHS |     |       |              |    |       | Birth<br>Rate | Total<br>No. of<br>Deaths | Death<br>Rate | Infant<br>Death<br>Rate | Natural<br>Increase<br>of Births<br>over Deaths |
|------|-------------------------|---------------|-----|-------|--------------|----|-------|---------------|---------------------------|---------------|-------------------------|-------------------------------------------------|
|      |                         | Legitimate    |     |       | Illegitimate |    |       |               |                           |               |                         |                                                 |
|      |                         | M.            | F.  | Total | M.           | F. | Total |               |                           |               |                         |                                                 |
| 1957 | 39,040                  | 534           | 517 | 1,051 | 9            | 14 | 23    | 27.5          | 172                       | 4.4           | 15.8                    | 902                                             |
| 1958 | 46,970                  | 598           | 609 | 1,207 | 10           | 17 | 27    | 26.25         | 261                       | 5.5           | 13.77                   | 973                                             |
| 1959 | 50,710                  | 644           | 619 | 1,263 | 11           | 11 | 22    | 25.34         | 255                       | 5.03          | 16.34                   | 1,030                                           |
| 1960 | 52,150                  | 655           | 579 | 1,234 | 5            | 9  | 14    | 23.93         | 267                       | 5.12          | 20.03                   | 981                                             |
| 1961 | 53,860                  | 644           | 599 | 1,243 | 15           | 19 | 34    | 23.71         | 285                       | 5.3           | 18.80                   | 992                                             |
| 1962 | 55,360                  | 583           | 595 | 1,178 | 19           | 11 | 30    | 21.82         | 298                       | 5.38          | 15.73                   | 910                                             |
| 1963 | 56,790                  | 627           | 603 | 1,230 | 17           | 21 | 38    | 22.32         | 345                       | 6.07          | 18.93                   | 923                                             |
| 1964 | 59,000                  | 588           | 594 | 1,182 | 24           | 26 | 50    | 20.88         | 301                       | 5.10          | 15.42                   | 931                                             |
| 1965 | 60,290                  | 569           | 516 | 1,085 | 21           | 27 | 48    | 18.79         | 313                       | 5.19          | 9.71                    | 820                                             |
| 1966 | 61,290                  | 514           | 508 | 1,022 | 31           | 29 | 60    | 17.65         | 355                       | 5.79          | 12.94                   | 727                                             |
| 1967 | 62,200                  | 459           | 463 | 922   | 37           | 35 | 72    | 15.98         | 336                       | 5.4           | 12.07                   | 658                                             |
| 1968 | 63,310                  | 445           | 444 | 889   | 39           | 24 | 63    | 15.03         | 389                       | 6.1           | 13.66                   | 563                                             |
| 1969 | 64,520                  | 468           | 473 | 941   | 27           | 37 | 64    | 15.6          | 414                       | 6.4           | 19.0                    | 591                                             |

Birth and Death Rates shown in above table have not been corrected  
by "Comparability Factor".

SOCIAL CONDITIONS

Situated between the Forest Ridge and the Weald in pleasant country, Crawley was for long a market town and shopping centre for the surrounding rural districts. Its recorded history dates back to Norman times. In the middle of the eighteenth century the London to Brighton Road, passing through the town, was one of the most frequented highways in Britain and the George Inn became a famous coaching house.

In 1947 it was decided that Crawley, with the surrounding area, should be expanded into one of the eight New Towns which it was planned to build in a ring approximately 25-30 miles from the centre of London. Crawley can claim the distinction of being the first of these to reach the stage of completion. Whereas the designated area of the town housed only 9,500 people in 1947, the present population is over 66,000. Thus many people, mainly from the metropolis, have moved to new surroundings where they enjoy a high standard of living and have established a settled community. Covering 6,000 acres, the town is approximately 3½ miles across and is surrounded by a green belt with ready access to the countryside. The Crawley Development Corporation was responsible for the planning and building of the town, but the administration of the area is in the hands of the local authorities - the West Sussex County Council and the Crawley Urban District Council.

The town was planned to have nine residential areas, with populations varying from 4,600 to 8,250, a Town Centre and an Industrial Area, the last being situated to the north of the town on the London side, adjoining the main road and railway. Each residential area is largely self-contained, having a Primary School, shops which provide for daily needs, a Church and a Public House. This arrangement cuts to a minimum the distance which children are obliged to walk to school in their early years. A tenth Neighbourhood is now nearly completed, 2,014 dwellings being in occupation. As Education Authority the West Sussex County Council has provided Primary and Secondary Schools, and a flourishing College of Further Education serves a wide area.

The first permanent Community Centre was built adjoining West Green Primary School, but since 1963 Community and Youth Centres have been provided in all developed Neighbourhoods.

The number of occupied dwellings which were erected by the Crawley Development Corporation and the New Towns Commission (Crawley Executive) totalled 12,353, including both houses and flats, at the end of the year.

There is a wide variation in the size and type of accommodation provided, with over 281 types of dwelling, and the average density is about 10-13 to the acre. At the end of 1969 the Crawley Urban District Council had 1,833 properties in occupation.

The vast majority of the residents work in Crawley, either in factories or in the town's services. Eighty-five factories are at present in production. Unemployment remains at a very low level. The total number at work in the town at the middle of the year was 42,341.

The policy adopted by the Crawley Development Corporation was to provide a limited number of shops in the Neighbourhood Centres, 136 in all, a larger number being in the more distant areas. The Town Centre has become a shopping area of regional importance, having over 153 new shops trading. This figure includes department stores, banks, gas and electricity showrooms etc.

An important step forward in recent years has been the continuing development of the Sports Centre, on a 12-acre site in Haslett's Avenue, where the championship-size pool was opened in 1964. The Sports Arena and adjoining all-weather practice area, provided with flood-lighting, fills a real need, for it must be remembered that 40% of the town's population is under 20 years of age. Plans for the Sports Hall have been approved and have the strong support of the Regional Sports Council; it is unfortunate that the current restriction on capital expenditure should cause continued delay in starting work on this - the final stage of a project which will make Crawley a popular centre for first-class sport.

#### NOTIFIABLE DISEASE

The following cases were notified during 1969. The figures in brackets indicate the number of cases notified the previous year:-

|                          |    |      |
|--------------------------|----|------|
| Measles .....            | 19 | (40) |
| Scarlet Fever .....      | 25 | (4)  |
| Whooping Cough .....     | 0  | (1)  |
| Sonne Dysentery .....    | 6  | (0)  |
| Acute Meningitis .....   | 2  | (1)  |
| Infective Jaundice ..... | 10 | (3)  |
| Typhoid Fever .....      | 2  | (0)  |
| Food Poisoning .....     | 5  | (2)  |

#### TUBERCULOSIS

Number of cases added to the register during the year - 13  
(9 in 1968)

(Of this number, 10 were new cases, the remainder being "transfers" when the patient moved to Crawley).

|                   |   |                       |   |
|-------------------|---|-----------------------|---|
| Pulmonary Males   | 7 | Non-Pulmonary Males   | 0 |
| Pulmonary Females | 3 | Non-Pulmonary Females | 3 |

Total number on register - 101

VACCINATION AND IMMUNISATION

I am indebted to Dr. T. McL. Galloway, the County Medical Officer of Health, for the following tables:-

Statistics for year ended 31st December, 1969

| Type of vaccine                           | 1969 | 1968 | 1967 | 1966 | 1962-5 | Others under age 16 | Total |
|-------------------------------------------|------|------|------|------|--------|---------------------|-------|
| <u>TRIPLE ANTIGEN</u><br>Primary          | 6    | 242  | 8    | 2    | -      | 1                   | 259   |
| Booster                                   | -    | 647  | 512  | 32   | -      | -                   | 1,191 |
| <u>DIPHTHERIA/<br/>TETANUS</u><br>Primary | -    | 4    | 1    | 1    | 15     | 11                  | 32    |
| Booster                                   | -    | 27   | 25   | -    | 1,326  | 604                 | 1,982 |
| <u>TETANUS</u><br>Primary                 | -    | -    | -    | -    | -      | -                   | -     |
| Booster                                   | -    | -    | -    | -    | -      | 2                   | 2     |
| <u>POLIOMYELITIS</u><br>Primary           | 5    | 250  | 13   | 6    | 14     | 11                  | 299   |
| Booster                                   | -    | 647  | 512  | 29   | 1,314  | 151                 | 2,653 |
| <u>MEASLES</u>                            | -    | 2    | 85   | 144  | 196    | 265                 | 692   |

SMALLPOX VACCINATIONPERSONS AGED UNDER 16

| Age at<br>date of<br>Vaccination | Number of Persons Vaccinated<br>or<br>Re-Vaccinated During Period |                         |
|----------------------------------|-------------------------------------------------------------------|-------------------------|
|                                  | Number<br>Vaccinated                                              | Number<br>Re-Vaccinated |
| 0-3 months                       | 2                                                                 |                         |
| 3-6 months                       | 2                                                                 |                         |
| 6-9 months                       | 3                                                                 |                         |
| 9-12 months                      | 50                                                                |                         |
| 1 year                           | 568                                                               |                         |
| 2-4 years                        | 66                                                                | 18                      |
| 5-15 years                       | 21                                                                | 2,962                   |
| TOTAL                            | 712                                                               | 2,980                   |

SANITARY CIRCUMSTANCES OF THE AREA

by the Chief Public Health Inspector, Mr. T. Steel

During the year there has been much national publicity concerning threats to the quality of our environment occasioned by rapid technological advance and the consequent increase in material wealth. Atmospheric pollution, water pollution and noise are among the subjects which have been widely discussed. Most people should now be aware that increased mobility, and greater material comfort and convenience, bring problems of pollution and noise, which, as yet, are insufficiently controlled to prevent degradation of our general environment.

It is significant that, even in a town as well planned as Crawley, there was during 1969 a considerable increase in the number of complaints from residents unfortunate enough to be living near factories or commercial premises where there have been increases in production or the introduction of new processes or the commencement of night working - all of which result from an increased demand for aids to better standards of living, but from which unfortunate minorities at present suffer annoyance or downright discomfort.

One of the main weaknesses is the lack of Planning control over changing circumstances in premises which have been given (or have acquired through the passage of time) some form of general approval. Legislation needs to be strengthened to control changes in processes and hours of working. Prevention is usually very much easier than cure, as described later in this report.

With regard to the proposed re-organisation of Local Government, it will be essential that close co-operation be maintained between Planning Officers and Public Health Inspectors if full use is to be made of Inspectors' experience of dealing with our environment as an entity. The Public Health Inspector is the officer with the most direct experience of the public's complaints, and the knowledge gained in dealing with these must continue to be applied in endeavouring to prevent avoidable causes of nuisance arising from future developments.

It is also imperative, with the advent of much larger authorities, that there be no worsening of the facilities for the public to lodge complaints and to receive prompt attention. In my report for 1965, I remarked on the possible connection between a marked increase in the number of complaints concerning food and the moving of the Department from Goffs Park to the Town Hall. Standards could easily deteriorate if the lodging of complaints became more troublesome, or if inspectors became less accessible.

Disappointment must be expressed at the slowing down of the Smoke Control programme as a result of the national shortage of solid smokeless fuels - particularly because of the coinciding of the shortage with the general publicity on the bad effects of atmospheric pollution on the environment.

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TOTAL NUMBER OF INSPECTIONS FOR ALL PURPOSES ..... 5933

### WATER SUPPLY

The results of routine chemical and bacteriological examinations indicated the maintenance of satisfactory standards.

Twenty-one samples were submitted for bacteriological examination and seven for chemical analysis. All were satisfactory.

Eight complaints were received regarding discoloured water following disturbance of deposit in the mains. Possible action to reduce this nuisance was discussed with officers of the Water Board.

| No. of dwellinghouses supplied with mains water direct to the houses | Estimated population |
|----------------------------------------------------------------------|----------------------|
| 19,657                                                               | 66,500 (revised)     |

New houses connected to main supply ..... 402

Number of houses with private supply ..... 2

Bacteriological samples taken from private supplies ... 1

### SWIMMING POOLS

#### Public

The quality of the water in the Council's pool remained satisfactory throughout the year, as was confirmed by routine chemical and bacteriological examinations of samples.

SWIMMING POOLS (Continued)Private

There are eleven private pools, ten being at schools and one at a factory on the industrial estate. During the year a new sterilising method was put into use at the school pools, under the supervision of the County Council's Environmental Health Officer. Dosing with hypochlorites was replaced by the positioning of tablets of trichloroisocyanuric acid (now conversationally referred to as "the pill") in the circulatory systems.

A few somewhat unsatisfactory bacteriological samples were obtained during the initial period required to establish correct dosages, but once these correct dosages had been determined, the new method gave every indication of being far more reliable and simple than the use of hypochlorite.

PUBLIC HEALTH ACTS 1936 and 1961

Number of notices served under the Public Health Acts:-

|                                   |    |
|-----------------------------------|----|
| Formal .....                      | -  |
| Informal .....                    | 21 |
| Number of notices complied with:- |    |
| Formal .....                      | -  |
| Informal .....                    | 17 |

COMPLAINTS (re Public Health and Housing matters)

|                                     |     |
|-------------------------------------|-----|
| Number of complaints received ..... | 89  |
| Inspections .....                   | 89  |
| Re-inspections .....                | 115 |

MOVEABLE DWELLINGSPublic Health Act, 1936Caravan Sites and Control of Development Act, 1960

|                                                                                         |    |
|-----------------------------------------------------------------------------------------|----|
| Inspections .....                                                                       | 13 |
| Number of notices served .....                                                          | -  |
| Number of moveable dwellings previously licensed under Public Health Act .....          | -  |
| Number of site licences issued under Caravan Sites and Control of Development Act ..... | -  |

COMMUNICABLE DISEASES

|                                    |     |
|------------------------------------|-----|
| Total number of visits .....       | 661 |
| Rooms disinfected .....            | 4   |
| Number of personal specimens ..... | 572 |

Communicable Diseases (Continued)

The majority of these visits were connected with an outbreak of Sonne dysentery in the Three Bridges neighbourhood.

INSECT PESTS

Number of visits in connection with  
fleas, ants, etc. .... 119

Most of these visits were made for the purpose of advising householders on the eradication of animal fleas and ants. Some were in connection with an infestation of bed-bugs which most probably originated from house-martins' nests under the eaves of a terrace of houses.

Wasps

The Department continued to give advice on the destruction of nests, and considerable use was made of the service offering spraying equipment and insecticide at a small charge.

Occupiers who do not wish to undertake the treatment themselves are referred to a private operator.

DRAINAGE AND SEWERAGE

Present arrangements for sewage disposal are quite adequate.

There remain only 40 houses with cesspool or other independent means of drainage, and the construction of new sewers with new development will still further reduce this figure in the coming years.

At present, cesspools are emptied by the Council as frequently as necessary, on request from occupiers.

|                                            |    |
|--------------------------------------------|----|
| Number of visits in connection with        |    |
| drainage .....                             | 62 |
| Houses connected to main drainage .....    | 1  |
| Other premises connected to main drainage  | -  |
| Houses provided with flushing cisterns.... | -  |
| Privies converted to E.Cs. ....            | -  |
| E.Cs. converted to W.Cs. ....              | -  |
| Drains repaired .....                      | 6  |

OFFENSIVE TRADES

Number of premises registered  
 (bone boiling and fat extracting)..... 1  
 Number of inspections ..... 10

Satisfactory conditions were maintained at these premises and, during the year, considerable improvements to the lay-out and the treatment equipment were effected.

NUISANCES FROM INDUSTRIAL PREMISES

During this year there were several complaints regarding new nuisances suffered by residents as a result of changes in processes in existing industrial premises and of the introduction or increase of night working.

The occurrence of such nuisances indicates a need for the strengthening of Planning control in respect of extended hours of working or the introduction of new processes in premises which were given previous general approval.

Under existing controls such nuisances can become established without the opportunity for the taking of remedial measures from the start. The introduction of remedies subsequent to the establishment of new circumstances is almost invariably a difficult, lengthy and expensive process - and often only of limited effect.

The nuisances complained of referred to fumes and dust, and in particular to noise, as mentioned in the following section.

NOISE ABATEMENT

No. of complaints ..... 19  
 No. of visits ..... 65

The complaints, in the main, concerned nuisance to residents caused by night working in factories and commercial premises (such as bakeries), and the night deliveries of ballast to a ready-mix concrete company.

Some complaints were a repetition of those previously dealt with and resulted from thoughtlessness of night staff about the avoidance of unnecessary noise and the neglect of preventive measures. Simple precautions such as the closing of doors and windows are apt to be neglected during periods of warm weather, and nuisance is worsened by the fact that residents themselves have more windows open during such periods.

The ideal remedy lies in securing adequate distance between

Noice Abatement (Continued)

sources of noise and residential areas, especially where suppressive measures are likely to be expensive, or easily rendered ineffective by forgetfulness or lack of consideration. Certain noises, such as those caused by vehicle movements or outdoor working, can rarely be fully controlled other than by distance.

Close co-operation is maintained with the Architect and Planning Officer in order to minimise foreseeable nuisances from industrial and commercial development.

Byelaws as to Hairdressers and Barbers

|                          |    |
|--------------------------|----|
| No. of premises .....    | 22 |
| No. of inspections ..... | 5  |

PREVENTION OF DAMAGE BY PESTS ACT, 1949Rodent Control

|                                                                  |     |
|------------------------------------------------------------------|-----|
| Number of notifications received.....                            | 345 |
| Number of infested premises found<br>as a result of survey ..... | 15  |

During the whole of the year treatments required for rats and mice in domestic premises were carried out by Rentokil Ltd. The service was entirely satisfactory.

The occupiers of many industrial and commercial premises now have contracts with one of the several companies operating in the area. Those occupiers not having contracts were referred to those companies when treatment was found necessary.

The general level of infestation by rats has now remained low-but practically constant - for many years. In the hopes of securing an even greater freedom from these pests, considerable thought has been given to the practicability of establishing permanent baiting points with a view to heading-off the continual movement into the town of rats from the surrounding countryside. Discussions have been held with Ministry of Agriculture officials on these lines, as the Ministry are at present concerned with field trials of this nature.

I feel, however, that a good deal more information as to probable cost is required than is available at present, as well as knowledge of possible unwanted side-effects, before a recommendation can be made. The possible introduction of warfarin-resistant rats would need to be carefully considered in relation to the type of poison chosen for permanent baiting points.

Rodent Control (Continued)

Rats will not stay where they cannot get food, and the most effective remedy is to prevent them obtaining any. Almost all infestations of rats in Crawley are found to result from lack of protection of waste foodstuffs - often because of damage to refuse bins or inadequate lids or covers - and from uncontrolled feeding of birds. All householders, as well as occupiers of other types of premises, can help to prevent infestations by keeping all waste food properly protected.

FOOD & DRUGS ACT, 1955Food Hygiene

The general standard of food premises has remained good and most defects have been of a minor nature.

There was a slight drop in the number of complaints concerning foodstuffs (83 as against 86 for 1968), 20 of which concerned mouldy or stale food (24 in 1968). A slight downward trend which it is hoped will continue.

There were seven complaints concerning foreign matter in bottles of milk.

No legal proceedings were instituted.

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For the second successive year all students of the catering course at Crawley College were enrolled for the examination course of the R.I.P.H.H. An evening class, consisting mainly of School Meals staff, was also arranged.

39 of 44 entrants for this examination were successful.

Thanks are again due to the College Principal, Dr. Siklos, and the Head of the Food and Fashion Department, Mrs. Piggott, for their continued interest in these courses.

Several talks were given to women's organisations and in schools, and short topical items referred to in "Civic News", the Council's quarterly information booklet.

POULTRY INSPECTION

There are no poultry processing plants in the district.

EGG PASTEURISATION PLANTS

There are no egg pasteurisation plants in the district.

FOOD PREMISESFood Hygiene (General) Regulations, 1960

|                                      |     |
|--------------------------------------|-----|
| Number of inspections.....           | 362 |
| Number of notices served .....       | 69  |
| Number of notices complied with .... | 64  |

Premises registered under Section 16

For sale of ice cream:-

|                                                           |            |
|-----------------------------------------------------------|------------|
| Grocers and Provision shops .....                         | 29         |
| Confectioners .....                                       | 27         |
| Bakers' shops .....                                       | 10         |
| Greengrocers .....                                        | 6          |
| Fishmongers .....                                         | 3          |
| Ice-cream Depot/Store .....                               | 2          |
| Butchers .....                                            | 2          |
| Wine Company .....                                        | 6          |
| Garage premises (vending machine/<br>forecourt) ....      | 2          |
| For the manufacture of sausages, preserved<br>foods etc:- |            |
| Butchers .....                                            | 22         |
| Grocers .....                                             | 3          |
| Confectioners .....                                       | -          |
| Fishmongers .....                                         | 10         |
| Bakers' shops .....                                       | 7          |
| Total .....                                               | <u>129</u> |

(Continued)

FOOD PREMISES (Continued)Number of Food premises in the district

|                                       |     |
|---------------------------------------|-----|
| Grocers and provision shops .....     | 56  |
| Confectioners .....                   | 28  |
| Greengrocers .....                    | 28  |
| Butchers .....                        | 29  |
| Bakehouses .....                      | 3   |
| Bakery Depots .....                   | 2   |
| Bakers' Shops .....                   | 15  |
| Fishmongers .....                     | 15  |
| Cafes and Restaurants .....           | 25  |
| Licensed premises/off licences .....  | 34  |
| School/Nursery canteens .....         | 37  |
| Factory Canteens .....                | 56  |
| Offices & shops canteens .....        | 13  |
| Old Peoples Homes/Nursing Homes ..... | 6   |
| Guest Houses .....                    | 7   |
| Clubs etc. ....                       | 18  |
| Total .....                           | 372 |

Number of premises fitted with wash hand basins  
(Regulation 16) ..... 372

Number of premises which are required to install sinks  
(Regulation 19) ..... 342

Number of such premises fitted with sinks ..... 342

The Food Hygiene (Markets, Stalls and Delivery Vehicles) Regulations, 1966.

|                                       |    |
|---------------------------------------|----|
| Number of inspections .....           | 18 |
| Number of notices served .....        | 3  |
| Number of notices complied with ..... | 1  |

TABLE OF SAMPLES SUBMITTED FOR ANALYSIS

| Article                | Number examined |          |       | Number adulterated or otherwise irregular |          |       |
|------------------------|-----------------|----------|-------|-------------------------------------------|----------|-------|
|                        | Formal          | Informal | Total | Formal                                    | Informal | Total |
| Drugs                  | -               | 22       | 22    | -                                         | 1        | 1     |
| Bread/Flour            | -               | 5        | 5     | -                                         | -        | -     |
| Butter and Margarine   | -               | 6        | 6     | -                                         | -        | -     |
| Cordials etc.          | -               | 5        | 5     | -                                         | -        | -     |
| Cream & Cream Products | -               | 6        | 6     | -                                         | -        | -     |
| Fresh & Dried Fruits   | -               | 5        | 5     | -                                         | -        | -     |
| Ice Cream Powder       | -               | 1        | 1     | -                                         | -        | -     |
| Milk & Milk Products   | 1               | 25       | 25    | -                                         | 1        | 1     |
| Sausages               | -               | 7        | 7     | -                                         | 1        | 1     |
| Shandy/Beer/Spirits    | 3               | 3        | 3     | -                                         | -        | -     |
| Cheese/Cheese Spread   | -               | 8        | 8     | -                                         | 1        | 1     |
| Meat & Meat Products   | -               | 18       | 18    | -                                         | 2        | 2     |
| Sugar Confectionery    | -               | 8        | 8     | -                                         | -        | -     |
| Tea                    | -               | 4        | 4     | -                                         | -        | -     |
| Fish-tinned            | -               | -        | -     | -                                         | -        | -     |
| Beverages              | -               | 2        | 2     | -                                         | 2        | 2     |
| Infant Food            | -               | 6        | 6     | -                                         | -        | -     |
| Preserves              | -               | 3        | 3     | -                                         | -        | -     |
| Biscuits               | -               | 1        | 1     | -                                         | -        | -     |
| Potato Mix             | -               | 2        | 2     | -                                         | 1        | 1     |
| Soup                   | -               | 3        | 3     | -                                         | -        | -     |
| Other Foods            | -               | 54       | 54    | -                                         | 3        | 3     |
| TOTAL                  | 4               | 194      | 194   | -                                         | 12       | 12    |

Food SamplesIrregularities - Food and Drug Sampling

All irregularities were of a comparatively minor nature and were dealt with informally.

MILKMilk and Dairies Regulations, 1959/63

|                                        |    |
|----------------------------------------|----|
| Number of dairies registered           |    |
| (distributing depots) .....            | 2  |
| Number of registered purveyors of milk | 50 |

The Milk (Special Designation) Regulations, 1963Dealers' Licences

|                          |    |
|--------------------------|----|
| Pasteurised .....        | 54 |
| Sterilised .....         | 19 |
| Untreated .....          | 3  |
| Ultra Heat Treated ..... | 8  |

|                                                      |   |
|------------------------------------------------------|---|
| Number of notices served under the regulations ..... | - |
| Number of notices complied with .....                | - |

Milk Samples

Bacteriological examination of milk:

| Designation | Samples Taken | Up to Standard | Below Standard (Failed Methylene Blue Test) |
|-------------|---------------|----------------|---------------------------------------------|
| U.H.T.      | 6             | 6              | -                                           |
| Untreated   | 12            | 6              | 6                                           |
| Pasteurised | 30            | 39             | 1                                           |
| Sterilised  | 7             | 7              | -                                           |
| Cream       | 8             | 2              | 6                                           |
| TOTAL       | 63            | 50             | 13                                          |

Milk Samples (Continued)

Biological examination of milk:

Milk Supplies - Brucella Abortus

- (i) Number of samples of raw milk examined (including cream) - 7  
 (ii) Number of positive samples found - 0

Methylene Blue Test of Cream

Eight samples of cream were submitted for Methylene Blue Test, six of which were considered unsatisfactory, although this test has not been officially accepted for cream.

ICE CREAM

| No. of samples | Prov.<br>Grade I | Prov.<br>Grade II | Prov.<br>Grade III | Prov.<br>Grade IV |
|----------------|------------------|-------------------|--------------------|-------------------|
| 10             | 5                | 5                 | -                  | 1                 |

This is a much more satisfactory situation than that prevailing in recent years, and results from the replacement of a previously pasteurised soft ice-cream mix with a sterilised mix.

The one Grade IV sample was taken from a cafe; subsequent samples were satisfactory.

UNFIT FOOD (other than meat at slaughterhouse)

The following articles of food (excluding meat at the slaughterhouse) were examined during the year and certified as unfit for human consumption.

1179 tins, jars and packets of various foods  
 151 lbs. of meat and poultry  
 20 stone of fish  
 450 Fish fingers (freezer burns)  
 23½ tons of Fruit, Vegetables and nuts (fire and  
 smoke damage)

In addition, 3,268 items of frozen food were dealt with at a Bakery Canteen and at local stores following refrigeration breakdowns.

Method of Disposal of Condemned Food

Meat and fish are released, where appropriate, for by-product usage; otherwise the condemned food is buried on the Council's refuse tip.

SLAUGHTERHOUSES

20 horses were killed in the one licensed slaughterhouse during 1969.

Number of visits ..... 12

KNACKERS' YARD

Number of premises licensed... 1

Number of inspections ..... 10

The standards maintained at the knackers' yard have remained satisfactory, both as regards general sanitation and as regards the care of animals taken in.

HOUSING

Continuing efforts were made to encourage the improvement of older houses, and 18 applications were approved.

A considerable amount of attention was given to houses in multiple occupation and 10 new directions were given under Section 19 of the 1961 Act, bringing the total in force at the end of the year up to 71.

Inspection of dwellinghouses during the year:-

Total number of visits for housing defects under  
Public Health and Housing Acts ..... 107

Housing Act, 19571. In Clearance Areas - Houses demolished in the period

- (a) Houses unfit for human habitation ..... —
- (b) Housing included by reason of bad arrangements etc. .... —
- (c) Houses on land acquired under Section 43 ..... —

Not in Clearance Areas

- (a) As a result of formal or informal procedure  
under Section 16 or Section 17(1) ..... 2

Housing Act, 1957 (Continued)

2. Houses closed in the period
  - (a) Under Secs. 16(4), 17(1) and 35(1) ..... -
  - (b) Under Secs. 17(3) and 26 ..... -
  - (c) Parts of building closed under Sec. 18 ..... -
3. Unfit houses in temporary use
  - (a) Retained for temporary accommodation
    - (1) Under Sec. 48 ..... -
    - (2) Under Sec. 17(2) ..... -
    - (3) Under Sec. 46 ..... -
  - (b) Licensed for temporary occupation under  
Secs. 34 and 53 ..... -
4. Houses Let-in-Lodgings
  - (a) Formal notices served under Sec. 90 ..... -
  - (b) Formal notices complied with ..... -
5. Overcrowding - Part IV, Housing Act, 1957
  - (a) 1. Number of dwellings overcrowded at end of year .. -
  2. Number of families dwelling therein ..... -
  3. Number of persons dwelling therein ..... -
  - (b) Number of cases of overcrowding reported  
during the year ..... -
  - (c) Number of cases of overcrowding relieved  
during the year ..... -
  - (d) Number of formal notices to abate overcrowding... -
  - (e) Number of formal notices complied with ..... -
  - (f) Number of informal notices to abate overcrowding -
  - (g) Number of informal notices complied with ..... -
6. Unfit houses made fit and houses in which defects were  
remedied  
 Unfit houses rendered fit and houses in which defects were  
 remedied during the period as a result of informal action  
 by the local authority under the Housing and Public Health  
 Acts ..... 3
  - (a) After formal action under Public Health Act:
    1. By owners ..... 3
    2. By local authority in default of owners..... -
  - (b) After formal action under Secs. 9 and 16,  
Housing Act, 1957:
    1. By owners ..... -
    2. By local authority in default of owners ... -
  - (c) Under Sec. 24 Housing Act, 1957 ..... -

Housing (Continued)Housing Act, 1961 (Part II)

|                                           |     |
|-------------------------------------------|-----|
| No. of inspections (Sec. 15 and 16) ..... | 114 |
| No. of directions given (Sec. 19) .....   | 10  |

Housing (Financial Provisions) Act, 1958House Purchase and Housing Act, 1959

|                                                  |    |
|--------------------------------------------------|----|
| Number of discretionary improvement grants ..... | 2  |
| Number of standard improvement grants .....      | 18 |

Rent Act, 1957 - Certificates of Disrepair

|                                            |   |
|--------------------------------------------|---|
| Number of Form G received .....            | - |
| Number of Undertakings accepted .....      | - |
| Number of Certificates issued .....        | - |
| Number of Certificates cancelled .....     | - |
| Number of Undertakings complied with ..... | - |

SECTION 60, PUBLIC HEALTH ACT, 1936 - Means of Escape from Fire in the case of Certain High Buildings

|                                   |    |
|-----------------------------------|----|
| Number of inspections .....       | 10 |
| Number of notices served:-        |    |
| Formal .....                      | -  |
| Informal .....                    | 5  |
| Number of notices complied with:- |    |
| Formal .....                      | -  |
| Informal .....                    | 2  |

CLEAN AIR ACT, 1956 & 1968Smoke Control Orders

The Order for the Northgate neighbourhood came into operation on the 1st October, 1969. A good many householders availed themselves of the opportunity which arose in connection with this Order of converting even approved open fires to the higher standard.

This now leaves only two neighbourhoods to be covered by Orders - Three Bridges and Pound Hill. A survey of Three Bridges was completed in anticipation of the making of an Order in the autumn but, in view of the shortage of solid smokeless fuels, the necessary assurances as to their supply were not forthcoming and the Council reluctantly decided to defer the making of an Order. It is only to be hoped that this set-back to the completion of Smoke Control in the town will be of short duration, though this depends entirely on the success of the measures now proposed nationally for the remedying

Clean Air Act, 1956 & 1968 (Continued)Smoke Control Orders (Continued)

of the solid fuels shortage, which has arisen from the rapid close-down of traditional coal-fired gas works and the consequent loss of gas cokes from the market.

Industrial Plant

Very few problems were experienced with industrial plant and adequate chimney heights were obtained where necessary without dispute.

Bonfires etc.

During the year there was a spate of complaints about smoke and ash resulting from the burning of vegetation - mostly in full leaf - on several "infilling" building sites situated close to established residential areas.

The Clean Air Act of 1968 now gives additional control over the burning of waste materials on commercial and industrial premises, but the conditional exemptions afforded in respect of building sites necessitate a good deal of attention if good co-operation from developers and their employees is not forthcoming. The cost of removal of waste material from a site or the proper control of its burning on site is the main point of contention.

OFFICES, SHOPS AND RAILWAY PREMISES ACT, 1963

Total No. of premises registered at end of year ..... 651

No. of employees in registered premises -

|         |             |
|---------|-------------|
| Male:   | 3133        |
| Female: | 4111        |
|         | <hr/>       |
| Total:  | 7244        |
|         | <hr/> <hr/> |

No. of visits ..... 419

No. of premises receiving a general inspection  
during the year ..... 377

No. of accidents reported ..... 24

OFFICES, SHOPS AND RAILWAY PREMISES ACT, 1963 (Continued)

Details of inspections and action taken under this Act are the subject of a separate return to the Ministry, a copy of which is available for inspection by any interested persons.

Only a few infringements were noted and these were all of a minor nature.

Twenty-four accidents were reported during the year, none of which can be attributed to structural defects or to insufficiently guarded machinery, and most were of a comparatively minor nature - bruises, cuts and strains etc.

The one really serious accident was to a window-cleaner who suffered a fractured skull and vertebral injuries on falling through a roof-light on to a concrete floor.

Where the standard of lighting was found to be below that recommended in the I.E.S. Code, little difficulty was experienced in persuading occupiers to improve lighting up to this standard.

FACTORIES ACT, 1961

(1) Inspections for purposes of provision as to health.

| Premises                                                                                             | No. on Register | Number of   |                 |                      |
|------------------------------------------------------------------------------------------------------|-----------------|-------------|-----------------|----------------------|
|                                                                                                      |                 | Inspections | Written Notices | Occupiers Prosecuted |
| (1)                                                                                                  | (2)             | (3)         | (4)             | (5)                  |
| (i) Factories in which Secs. 1,2,3,4 & 6 are to be enforced by local authority                       | 2               | -           | -               | -                    |
| (ii) Factories not included in (i) in which Sec. 7 is enforced by local authority                    | 204             | 54          | 8               | -                    |
| (iii) Other premises in which Sec. 7 is enforced by local authority (excluding outworkers' premises) | 58              | 25          | -               | -                    |
| TOTAL                                                                                                | 264             | 79          | 8               | -                    |

FACTORIES ACT, 1961 (Continued)

(2) Cases in which defects were found.

| Particulars<br><br>(1)                                                      | Number of cases in which defects were found |                     |                              |                              | No. of cases in which prosecutions were instituted<br><br>(6) |
|-----------------------------------------------------------------------------|---------------------------------------------|---------------------|------------------------------|------------------------------|---------------------------------------------------------------|
|                                                                             | Found<br><br>(2)                            | Remedied<br><br>(3) | Referred                     |                              |                                                               |
|                                                                             |                                             |                     | To H.M. Inspector<br><br>(4) | By H.M. Inspector<br><br>(5) |                                                               |
| Want of cleanliness (S.1)                                                   | 1                                           | -                   | -                            | -                            | -                                                             |
| Overcrowding (S.2)                                                          | -                                           | -                   | -                            | -                            | -                                                             |
| Unreasonable temperature (S.3)                                              | -                                           | -                   | -                            | -                            | -                                                             |
| Inadequate ventilation (S.4)                                                | -                                           | -                   | -                            | -                            | -                                                             |
| Ineffective drainage of floors (S.6)                                        | -                                           | -                   | -                            | -                            | -                                                             |
| Sanitary Conveniences (S.7)                                                 |                                             |                     |                              |                              |                                                               |
| (a) Insufficient                                                            | -                                           | -                   | -                            | -                            | -                                                             |
| (b) Unsuitable or defective                                                 | 5                                           | 1                   | -                            | -                            | -                                                             |
| (c) Not separate for sexes                                                  | -                                           | -                   | -                            | -                            | -                                                             |
| Other offences against the Act (not including offences relating to outwork) | -                                           | -                   | -                            | -                            | -                                                             |
| TOTAL                                                                       | 6                                           | 1                   | -                            | -                            | -                                                             |

Outwork - Sections 133 and 134

| Nature of Work<br><br>(1) | Section 133                                                        |                                                                |                                                        | Section 134                                              |                       |                     |
|---------------------------|--------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------|-----------------------|---------------------|
|                           | No. of out-workers in Aug. list required by S,133 (1)(c)(2)<br>(2) | No. of cases of default in sending lists to the Council<br>(3) | No. of prosecutions for failure to supply lists<br>(4) | No. of instances of work in un-wholesome premises<br>(5) | Notices served<br>(6) | Prosecutions<br>(7) |
| Wearing Apparel (making)  | 2                                                                  | -                                                              | -                                                      | -                                                        | -                     | -                   |
| Lampshades                | 25                                                                 | -                                                              | -                                                      | -                                                        | -                     | -                   |
| Costume Jewellery         | 155                                                                | -                                                              | -                                                      | -                                                        | -                     | -                   |
| TOTAL                     | 182                                                                | -                                                              | -                                                      | -                                                        | -                     | -                   |

HOME SAFETYHeating Appliances (Fireguards) Act, 1952Consumer Protection Act, 1961

A general watch has been kept on the heating appliances being sold in the district. All appliances seen bore reference to the appropriate British Standard and it was not considered necessary to test any appliance.

Oil Heaters Regulations, 1962

All oil heaters seen to be on sale in the district were noted to be bearing the appropriate British Standard Certification mark.

Local Home Safety Committee

Although this is a voluntary organisation, its formation in 1960 was sponsored by the Council and relies on a Council grant for its financing. Activities are now mainly organised by Mr. Smith, my Deputy, with co-option of representatives of other bodies as appropriate.

No exhibition was held this year - an exhibition every other year appears to arouse more interest than an annual event and the next is planned for 1970.

Several incidents were investigated, and in one case, the Home Office have undertaken to follow up a complaint, received from a local Children's Nursery, regarding the similarity between plastic containers containing Orange Squash and those containing ammonia solution for kitchen use.

A number of talks have been given to Schools and local organisations on the theme "Safety in the Home", and items of topical interest have been included in the "Civic News".

PETROLEUM (CONSOLIDATION) ACT, 1928

|                                                    |     |
|----------------------------------------------------|-----|
| Number of Licences issued.....                     | 87  |
| Number of inspections .....                        | 309 |
| Number of disused installations made<br>safe ..... | 3   |

A serious petrol leakage occurred at one of the major filling stations in July, entailing a great deal of attention and care by all concerned. The spillage was accidental, being occasioned by a faulty pump, and legal proceedings were not instituted.

Discovery of the spillage followed a complaint about petrol fumes in a basement some distance away and emphasised the need for the stringent safety precautions which are necessary in connection with petrol and other highly flammable substances.

A second suspected loss of some hundreds of gallons of petrol from another filling station was not found to be attributable to any defect in the installation. It was concluded that the loss was due to a book-keeping error of quantity delivered, although extensive testing and investigation was necessary before it was possible to relax vigilance.

SHOPS ACT, 1950

Total inspections for all purposes ..... 160

PET ANIMALS ACT, 1951

|                                   |    |
|-----------------------------------|----|
| Number of premises licensed ..... | 4  |
| Number of inspections .....       | 18 |

ANIMAL BOARDING ESTABLISHMENTS ACT, 1963

|                                                |   |
|------------------------------------------------|---|
| No. of applications for licences received..... | 1 |
| No. of licences issued .....                   | 1 |
| No. of visits .....                            | 2 |

RIDING ESTABLISHMENTS ACT, 1964

|                                                 |   |
|-------------------------------------------------|---|
| No. of applications for licences received ..... | - |
| No. of licences issued .....                    | - |
| No. of visits .....                             | - |

COURSES OF INSTRUCTION ATTENDED

|                                                                                               |                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D.E. SMITH<br>Deputy Chief Public Health Inspector                                            | Course on Noise Control<br>Institute of Sound and<br>Vibration Research, University<br>of Southampton.                                                              |
| D.E. SMITH<br>Deputy Chief Public Health Inspector<br>L.P. POOLE<br>Senior District Inspector | Weekend Seminar, Folkestone<br>The Association of Public Health<br>Inspectors.                                                                                      |
| J.M. COULTOUS<br>District Inspector                                                           | C.U.C. approved appliance<br>Installers Course (Smoke Control)<br>Crawley College of Further Education                                                              |
| D.E. SMITH<br>Deputy Chief Public Health Inspector                                            | Course of Instruction for Petroleum<br>Officers.<br>Association for Petroleum Acts<br>Administration                                                                |
| A.F. SCREETON<br>District Inspector                                                           | Course for Diploma in Air Pollution<br>Control (Royal Society of Health)<br>South East London Technical College<br>London S.E.26 - September, 1969 -<br>June, 1970. |

The scope of the Public Health Inspectors' duties is continually widening and technical advancements have been particularly rapid in recent years. Constant post-qualification study is essential and the Council's ready appreciation of this point is welcomed.

## APPENDIX A

### GENERAL PROVISION OF HEALTH SERVICES IN THE AREA

#### 1. Laboratory Facilities

Routine bacteriological work is carried out at the Brighton Public Health Laboratory. Routine samples of water, milk and ice-cream are submitted, together with many other types of specimens. Arrangements have been made for the despatch to the laboratory by the Public Health Department of any specimens which general practitioners may wish to send for examination.

We are indebted to Dr. J.E. Jameson, the Director of the Laboratory, for his assistance and advice on many occasions.

#### 2. Ambulance Service

The ambulance service is administered by the County Council. Six ambulance vehicles were in use, and the staff increased to a Station Officer and twelve ambulancemen. During 1969 the Crawley ambulances covered 111,857 miles and conveyed 18,717 patients.

#### 3. Hospital Accommodation for Infectious Disease

The majority of cases of infectious disease in need of hospital treatment are normally admitted to Foredown I.D.H. at Hove, although the number sent in during 1969 was small. I must express my appreciation of the helpful co-operation of the Medical Superintendent.

We are advised that any cases of Smallpox occurring in the District should be sent to the River Hospital (Long Reach), Dartford, Kent.

#### 4. Clinics and Treatment Centres

##### A. By Local Health Authority

The following is an account of the Services provided in the area by the West Sussex County Council as Local Health Authority.

(a) Nursing: The West Sussex County Council employs District Nurses, Midwives, Health Visitors and School Nurses. In Crawley the Health Visitors act as School Nurses, but District Nurses and Midwives operate separately.

(b) Maternity and Child Welfare: Child Health Clinics are held as follows:-

Health Clinic, Exchange Road, Crawley. Sessions are held each Tuesday from 2 p.m., a doctor being in attendance.

Langley Green Clinic. Sessions are held each Wednesday from 2 p.m., a doctor being in attendance.

Jubilee Hall, Three Bridges. Sessions are held twice weekly (Monday and Thursday) from 2 p.m. A doctor is in attendance on the first, third and fifth Mondays and also on the second and fourth Thursdays in the month.

Bishop Bell Clinic, Tilgate. Sessions are held on Mondays and Fridays from 2 - 4 p.m., a doctor being in attendance on the second and fourth Monday, and also on the first, third and fifth Friday in the month.

Southgate Community Hut. Sessions are held each Thursday from 2 - 4 p.m., a doctor being in attendance on the third Thursday in the month.

Gossops Green Clinic (at Gossops Green School). Sessions are held weekly on Wednesdays from 10 a.m., a doctor being in attendance.

Family Planning Clinic. Family Planning Clinics are held at:-

Health Clinic, Exchange Road, Crawley, at 7 p.m. to 9 p.m. on Mondays and 1.45 p.m. to 3.45 p.m. on Fridays, and for Oral Contraception only on Thursdays from 6.45 p.m. Youth advisory sessions at 6.30 p.m. to 8.30 p.m. on Tuesdays. Bishop Bell Clinic, Tilgate, on Mondays, 9.45 a.m. to 11.45 a.m. and on the first and third Thursdays from 9.45 a.m. to 11.45 a.m.

Relaxation Classes

Health Clinic, Exchange Road. Classes are held weekly on Mondays at 2 p.m.

(c) School Health Service. Regular inspections of children are carried out at all schools by the District M.O.H. and other School Medical Officers in the service of the County Council.

Two Dental Surgeons operate in Crawley. Regular sessions are held at the Crawley Health Clinic and Langley Green Clinic.

Eye, Orthopaedic, Child Guidance, Physiotherapy and Speech Clinics are held in the town.

Sessions for immunisations are held at the Crawley Health Clinic, and at the Clinics in Three Bridges, Tilgate, Gossops Green, Southgate and Langley Green.

(d) Home Help Service. The County Council provides a directly-administered Home Help Service. All enquiries should be addressed to the Area Home Help Organiser, 32-40, North Street, Horsham.

## B. Other Facilities

(i) Hospital and Specialist Services. A comprehensive hospital and specialist service is provided by the Regional Hospital Board. Hospital accommodation of a private nature is available in certain circumstances, subject to appropriate charges.

(ii) General Medical and Dental Services. Everyone is entitled, as part of the arrangements of the National Health Service, to general medical and dental care. Local arrangements for these services are organised through the National Health Executive Council for West Sussex, 175, Broyle Road, Chichester.

(iii) Crawley Chest Clinic. Patients who are referred to the Consultant Chest Physician are seen at the Clinic in Crawley Hospital, where sessions are held on Wednesday mornings.

(iv) Venereal Diseases. Patients may attend the Clinic at the Redhill General Hospital or at the Royal Sussex County Hospital, Brighton. Treatment is confidential and times are as follows:-

### Redhill General Hospital

Men - Mondays 5 p.m. to 7 p.m.

### Royal Sussex County Hospital

Men - Mondays 2 - 3 p.m. and 4 - 7 p.m.  
Wednesdays 9.30 a.m. - 1 p.m.  
Thursdays 2 - 5 p.m.

Women - Tuesdays 4 - 7 p.m.  
Thursdays 10 a.m. - 1 p.m.

Men and Women - Fridays 11 a.m. to 12 noon (by appointment only)

Sessions for women are also held at the Croydon General Hospital on Mondays 2 - 6.30 p.m., Wednesdays 10.30 a.m. - 12.30 p.m. and Thursdays 4.30 - 6.30 p.m.



APPENDIX B

WATER EXAMINATION

I am indebted to the Chief Engineer to the North West Sussex Water Board, for information regarding the examination of water at source. All examinations are carried out by Mr. T.B. Wood, B.Sc., A.M. Inst. F., Chief Chemist and Bacteriologist to the Board. The following comments are made:-

- 1 (a) The water supply of the area has been satisfactory in quality and adequate in quantity.
- (b) No incidents of contamination were detected.
- (c) Fluoride readings will be found in the table of chemical analyses and can generally be said to be in the order of 0.1 ppm.F
- 2 (a) Details of bacteriological and chemical analyses are shown in the following tables.
- (b) The characteristics of the water are such as not to give rise to plumbo-solvent action. The few samples analysed for lead have shown this metal to be absent.

The Chief Engineer has kindly provided me with the following extract from his Annual Report and has also permitted me to quote the section on Chemical Analyses.

"The Ministry of Health Report No. 71 on Bacteriological Examination of Water Supplies states that a Coliform count of over 10 organisms per 100 mls, and/or the presence of 1 or 2 E. Coli organisms renders the water unsatisfactory. A further stipulation states that 95% of all samples taken during any one year of a particular water supply should be free from E. Coli organisms.

Table II is prepared to show the purity of the Final Waters (waters pumped into supply) and the waters within the distribution system as sampled at consumers' taps and at various points on the Board's appliances. Details of the Raw Waters are given for comparison purposes.

Close liaison is maintained between the Chemist and the Public Health Inspectors of the various authorities within the Board's area who take samples of the water supply as a statutory obligation. This is a very satisfactory situation and the Board are grateful for their continued vigilance."

"Comments on Table II are necessary as follows:-

1. Almost all the raw waters have shown some deterioration in bacterial purity this year.
2. Two final waters have dropped below the ideal standard of '100% of samples free from coliform organisms'. The samples which gave rise to this situation were of 1 or 2 coliform organisms per 100 ml. so individually were considered satisfactory. Retest samples taken on each occasion showed the water to be devoid of coliform. All samples were devoid of E. Coli.
3. Samples which are placed under the heading of 'Distribution' are taken at random throughout the Board's area from consumer taps. Such points are not fitted with sampling taps as are the Board's installations and as such are not easy to sterilise. This fact and the fact that more samples have been taken in this respect, accounts for the digression from the expected high standard of purity.
4. Satisfactory bacteria results are always obtained from new mains before they are allowed to provide drinking water.

#### CHEMICAL ANALYSES

Average chemical analyses have been set out in table form for all the Raw Waters and Final Waters at the Board's Pumping Stations.

Changes in character of the waters pumped into supply as compared with previous years are insignificant but one or two comments are warranted in connection with the figures obtained.

Due to a small quantity of Manganese being present in No. 4 and No. 6 Boreholes at Hardham, the final water pumped into supply contains a trace of this material. This small quantity of Manganese is no detriment to the water quality but a nuisance factor is created by its deposition within the Board's mains. Apart from this and a slight decrease in the average total hardness as compared with last year's figure, the water remains remarkably consistent in view of the seasonal changes in river water quality and the final water being a mixture of borehole water and treated river water."

"CHEMICAL ANALYSES (Continued)

Nutbourne and Smock Alley Pumping Stations have again only been run to supplement the water supply at peak demand periods so few samples have been obtained of these waters. These places are however used as sampling points for the Hardham water which is supplied into their respective distribution areas.

The analyses of the water from the boreholes into the Folkstone Sands at Hardham have continued to change gradually over the period under review. Every effort has been made to maintain a fixed pumping pattern during the year to assist in the recharge experiments and as No. 2 Borehole has been rested during this time no analyses have been obtained.

The two new sources, No. 7 Folkstone Borehole and Lodsworth No. 3 Borehole, mentioned in last year's report, have not been put on to supply as yet but works to achieve this are nearing completion and it is anticipated that they will be brought into use in the near future. Neither is expected to give rise to any marked differences in the water character supplied from the respective stations."

-----

Bacteriological ExaminationsTABLE II

| Type        | Source                       | No. of Samples | % Free from Coliform Type | % Free from E. Coli |
|-------------|------------------------------|----------------|---------------------------|---------------------|
| Raw Water   | Hardham River Intake         | 40             | NIL                       | 7.5                 |
|             | " B/H 2                      | -              | -                         | -                   |
|             | " B/H 3                      | 100            | 98.0                      | 100                 |
|             | " B/H 4                      | 56             | 94.6                      | 100                 |
|             | " B/H 5                      | 51             | 100                       | 100                 |
|             | " B/H 6                      | 47             | 97.9                      | 100                 |
|             | Combined B/H Inlet Weir Wood | 37<br>48       | 100<br>12.5               | 100<br>33.3         |
| Final Water | Hardham                      | 273            | 99.6                      | 100                 |
|             | Weir Wood                    | 124            | 99.2                      | 100                 |
|             | Service Reservoirs           | 545            | 96.5                      | 99.4                |
|             | Kiosks                       | 575            | 98.1                      | 99.7                |
|             | Distribution                 | 781            | 93.6                      | 99.0                |
|             | New Mains                    | 166            | 84.0                      | 98.0                |

FINAL WATERS 1969/70

|                            | SOURCE  |      |       |           |      |       |
|----------------------------|---------|------|-------|-----------|------|-------|
|                            | HARDHAM |      |       | WEIR WOOD |      |       |
|                            | 72      |      |       | 76        |      |       |
|                            | Av.     | Max. | Min.  | Av.       | Max. | Min.  |
| No. of Samples             |         |      |       |           |      |       |
| Temp. °C                   | 11.4    | 15.0 | 8.0   | 13.3      | 22.0 | 3.0   |
| Colour                     | <5      | <5   | <5    | <5        | <5   | <5    |
| pH                         | 8.00    | 8.90 | 7.20  | 8.11      | 9.30 | 7.40  |
| Electrical Conductivity    | 252     | 300  | 163   | 288       | 320  | 251   |
| Total Dissolved Solids ppm | 174     | 196  | 110   | 188       | 226  | 158   |
| Total Hardness ppm         | 101     | 118  | 53    | 116       | 127  | 100   |
| Temporary Hardness ppm     | 62      | 72   | 32    | 56        | 75   | 44    |
| Chlorides ppm              | 29      | 38   | 25    | 30        | 39   | 26    |
| Free Carbon Dioxide ppm    | 1.0     | 6.0  | NIL   | 1.0       | 6.0  | NIL   |
| Iron ppm                   | 0.04    | 0.11 | 0.01  | 0.02      | 0.06 | <0.01 |
| Manganese ppm              | 0.01    | 0.04 | <0.01 | <0.01     | 0.06 | <0.01 |
| Aluminium ppm              | <0.02   | 0.06 | <0.02 | 0.05      | 0.26 | <0.02 |
| Fluorides ppm              | 0.08    | 0.11 | 0.06  | 0.11      | 0.14 | 0.09  |
| Residual Chlorine ppm      | 0.26    | 0.40 | 0.18  | 0.46      | 1.20 | 0.08  |



# RAW WATERS 1969/70

|                         | Source                     |       |       |                              |      |      |                              |       |       |                              |       |       |                              |       |       |                              |      |       |                                  |      |       |              |      |       |
|-------------------------|----------------------------|-------|-------|------------------------------|------|------|------------------------------|-------|-------|------------------------------|-------|-------|------------------------------|-------|-------|------------------------------|------|-------|----------------------------------|------|-------|--------------|------|-------|
|                         | HARDHAM<br>RIVER<br>INTAKE |       |       | HARDHAM<br>NO. 2<br>BOREHOLE |      |      | HARDHAM<br>NO. 3<br>BOREHOLE |       |       | HARDHAM<br>NO. 4<br>BOREHOLE |       |       | HARDHAM<br>NO. 5<br>BOREHOLE |       |       | HARDHAM<br>NO. 6<br>BOREHOLE |      |       | HARDHAM<br>COMBINED<br>B/H INLET |      |       | WEIR<br>WOOD |      |       |
|                         | 35                         |       |       | 0                            |      |      | 128                          |       |       | 79                           |       |       | 66                           |       |       | 70                           |      |       | 25                               |      |       | 41           |      |       |
| No. of Samples          | Av.                        | Max.  | Min.  | Av.                          | Max. | Min. | Av.                          | Max.  | Min.  | Av.                          | Max.  | Min.  | Av.                          | Max.  | Min.  | Av.                          | Max. | Min.  | Av.                              | Max. | Min.  | Av.          | Max. | Min.  |
| Temp. °C                | 10.4                       | 17.8  | 1.7   | -                            | -    | -    | 11.0                         | 12.1  | 10.0  | 11.2                         | 12.5  | 10.2  | 11.2                         | 12.5  | 6.0   | 11.3                         | 12.4 | 10.4  | 11.3                             | 12.4 | 11.0  | 11.6         | 21.5 | 2.2   |
| Colour                  | 17                         | 60    | 5     | -                            | -    | -    | <5                           | <5    | <5    | <5                           | <5    | <5    | <5                           | <5    | <5    | <5                           | <5   | <5    | <5                               | <5   | <5    | 13           | 25   | 5     |
| pH                      | 7.90                       | 8.20  | 7.38  | -                            | -    | -    | 6.62                         | 7.00  | 6.15  | 5.58                         | 6.50  | 5.35  | 5.80                         | 6.40  | 5.45  | 5.17                         | 5.50 | 4.90  | 6.26                             | 6.70 | 5.90  | 8.06         | 9.00 | 7.60  |
| Electrical Conductivity | 344                        | 380   | 320   | -                            | -    | -    | 261                          | 310   | 238   | 155                          | 180   | 118   | 77                           | 85    | 73    | 115                          | 123  | 110   | 143                              | 155  | 132   | 247          | 265  | 223   |
| Total Dissolved Solids  |                            |       |       |                              |      |      |                              |       |       |                              |       |       |                              |       |       |                              |      |       |                                  |      |       |              |      |       |
| ppm                     | 232                        | 259   | 171   | -                            | -    | -    | 166                          | 177   | 149   | 97                           | 109   | 92    | 50                           | 59    | 42    | 71                           | 83   | 66    | 93                               | 104  | 68    | 159          | 179  | 133   |
| Suspended Solids ppm    | 20                         | 196   | 1     | -                            | -    | -    | NIL                          | NIL   | NIL   | NIL                          | NIL   | NIL   | NIL                          | NIL   | NIL   | NIL                          | NIL  | NIL   | NIL                              | NIL  | NIL   | 5            | 27   | 1     |
| Total Hardness ppm      | 151                        | 174   | 132   | -                            | -    | -    | 98                           | 103   | 87    | 44                           | 54    | 28    | 13                           | 15    | 11    | 25                           | 29   | 23    | 42                               | 49   | 38    | 97           | 107  | 87    |
| Temporary Hardness ppm  | 114                        | 140   | 58    | -                            | -    | -    | 47                           | 53    | 41    | 11                           | 18    | 8     | 8                            | 10    | 5     | 6                            | 9    | 4     | 16                               | 25   | 13    | 59           | 74   | 48    |
| Chlorides ppm           | 29                         | 34    | 26    | -                            | -    | -    | 29                           | 33    | 21    | 24                           | 28    | 21    | 21                           | 25    | 19    | 26                           | 28   | 23    | 25                               | 26   | 24    | 27           | 31   | 25    |
| Free Carbon Dioxide ppm | 2.1                        | 8.0   | NIL   | -                            | -    | -    | 20.5                         | 41.0  | 9.5   | 31.9                         | 45.0  | 12.5  | 14.1                         | 22.0  | 8.5   | 23.9                         | 36.0 | 14.0  | 17.9                             | 37.0 | 12.0  | 1.2          | 7.0  | NIL   |
| Iron ppm                | 0.62                       | 2.60  | 0.16  | -                            | -    | -    | 0.04                         | 0.14  | 0.01  | 0.09                         | 0.11  | 0.06  | 0.05                         | 0.22  | 0.01  | 0.04                         | 0.06 | <0.01 | 0.04                             | 0.13 | 0.01  | 0.18         | 0.38 | 0.02  |
| Manganese ppm           | 0.05                       | 0.75  | <0.01 | -                            | -    | -    | <0.01                        | <0.01 | <0.01 | 0.06                         | 0.09  | 0.02  | <0.01                        | <0.01 | <0.01 | 0.07                         | 0.12 | 0.04  | 0.03                             | 0.06 | <0.01 | 0.41         | 1.10 | 0.01  |
| Aluminium ppm           | <0.02                      | <0.02 | <0.02 | -                            | -    | -    | <0.02                        | <0.02 | <0.02 | <0.02                        | <0.02 | <0.02 | <0.02                        | <0.02 | <0.02 | <0.02                        | 0.06 | <0.02 | <0.02                            | 0.06 | <0.02 | 0.01         | 0.06 | <0.02 |
| Fluorides ppm           | 0.13                       | 0.23  | 0.02  | -                            | -    | -    | 0.10                         | 0.19  | 0.05  | 0.05                         | 0.06  | 0.04  | 0.09                         | 0.19  | 0.02  | 0.06                         | 0.14 | 0.02  | 0.05                             | 0.09 | <0.01 | 0.12         | 0.15 | 0.10  |





